



Phase II and Phase III Archeological Database and Inventory

Site Number: 18WA288

Site Name: Antietam Furnace Complex

Prehistoric ☐

Other name(s) (Commonly called Mt. Aetna Furnace)

Historic ☒

Unknown ☐

Brief Description:

18th century iron furnace complex, ruins

Site Location and Environmental Data:

Latitude 39.6026 Longitude -77.5895

Elevation 232 m Site slope 11-20%

Site setting

-Site Setting restricted

-Lat/Long accurate to within 1 sq. mile, user may need to make slight adjustments in mapping to account for sites near state/county lines or streams

Maryland Archeological Research Unit No. 19

SCS soil & sediment code EdD2

Physiographic province Great Valley

Terrestrial site ☒

Underwater site ☐

Ethnobotany profile available ☐ Maritime site ☐

Nearest Surface Water

Name (if any) unnamed tributary

Saltwater

Ocean ☐

Estuary/tidal river ☐

Tidewater/marsh ☐

Spring ☐

Minimum distance to water is 92 m

Freshwater

Stream/river ☒

Swamp ☐

Lake or pond ☐

Temporal & Ethnic Contextual Data:

Paleoindian site ☐

Woodland site ☐

Archaic site ☐

MD Adena ☐

Early archaic ☐

Early woodland ☐

Middle archaic ☐

Mid. woodland ☐

Late archaic ☐

Late woodland ☐

Unknown prehistoric context ☐

Contact period site ☐

ca. 1820 - 1860 ☐

ca. 1630 - 1675 ☐

ca. 1860 - 1900 ☐

ca. 1675 - 1720 ☐

ca. 1900 - 1930 ☐

ca. 1720 - 1780 ☐

Post 1930 ☐

ca. 1780 - 1820 ☐

Unknown historic context ☐

Unknown context ☐

Ethnic Associations (historic only)

Native American ☐

Asian American ☐

African American ☐

Unknown ☐

Anglo-American ☒

Other ☐

Hispanic ☐

Y=Confirmed, P=Possible

Site Function Contextual Data:

Historic

Urban/Rural? Rural ☒

Domestic

Homestead ☐

Farmstead ☐

Mansion ☐

Plantation ☐

Row/townhome ☐

Cellar ☐

Privy ☐

Industrial

Mining-related ☐

Quarry-related ☐

Mill ☐

Black/metalsmith ☐

Furnace/forge ☒

Other ☐

Transportation

Canal-related ☐

Road/railroad ☐

Wharf/landing ☐

Maritime-related ☐

Bridge ☐

Ford ☐

Educational

Commercial

Trading post ☐

Store ☐

Tavern/inn ☐

Military

Battlefield ☐

Fortification ☐

Encampment ☐

Townsite

Religious

Church/mtg house ☐

Ch support bldg ☐

Burial area

Cemetery ☐

Sepulchre ☐

Isolated burial ☐

Bldg or foundation ☒

Possible Structure ☐

Post-in-ground ☐

Frame-built ☒

Masonry ☒

Other structure ☐

Slave related

Non-domestic agri

Recreational

Midden/dump ☐

Artifact scatter ☐

Spring or well ☐

Unknown ☐

Other context ☒

furnace complex

Interpretive Sampling Data:

Prehistoric context samples

Soil samples taken ☐

Flotation samples taken ☐

Other samples taken ☐

Historic context samples

Soil samples taken ☐

Flotation samples taken ☒

Other samples taken ☐



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Diagnostic Artifact Data:

Projectile Point Types	
Clovis	<input type="text"/>
Hardaway-Dalton	<input type="text"/>
Palmer	<input type="text"/>
Kirk (notch)	<input type="text"/>
Kirk (stem)	<input type="text"/>
Le Croy	<input type="text"/>
Morrow Mntn	<input type="text"/>
Guilford	<input type="text"/>
Brewerton	<input type="text"/>
Otter Creek	<input type="text"/>
Koens-Crispin	<input type="text"/>
Perkiomen	<input type="text"/>
Susquehanna	<input type="text"/>
Vernon	<input type="text"/>
Piscataway	<input type="text"/>
Calvert	<input type="text"/>
Selby Bay	<input type="text"/>
Jacks Rf (notch)	<input type="text"/>
Jacks Rf (pent)	<input type="text"/>
Madison/Potomac	<input type="text"/>
Levanna	<input type="text"/>

Prehistoric Sherd Types

Marcey Creek	<input type="text"/>	Popes Creek	<input type="text"/>	Shepard	<input type="text"/>	Keyser	<input type="text"/>
Dames Qtr	<input type="text"/>	Coulbourn	<input type="text"/>	Townsend	<input type="text"/>	Yeocomico	<input type="text"/>
Selden Island	<input type="text"/>	Watson	<input type="text"/>	Minguannan	<input type="text"/>	Monongahela	<input type="text"/>
Accokeek	<input type="text"/>	Mockley	<input type="text"/>	Sullivan Cove	<input type="text"/>	Susquehannock	<input type="text"/>
Wolfe Neck	<input type="text"/>	Clemson Island	<input type="text"/>	Shenks Ferry	<input type="text"/>		
Vinette	<input type="text"/>	Page	<input type="text"/>	Moyaone	<input type="text"/>		
				Potomac Cr	<input type="text"/>		

Historic Sherd Types

Earthenware		Ironstone	<input type="text"/> 5	Staffordshire	<input type="text"/>	Stoneware	
Astbury	<input type="text"/>	Jackfield	<input type="text"/>	Tin Glazed	<input type="text"/> 5	English Brown	<input type="text"/>
Borderware	<input type="text"/>	Mn Mottled	<input type="text"/>	Whiteware	<input type="text"/> 53	Eng Dry-bodie	<input type="text"/>
Buckley	<input type="text"/>	North Devon	<input type="text"/>	Porcelain	<input type="text"/> 10	Nottingham	<input type="text"/>
Creamware	<input type="text"/> 13	Pearlware	<input type="text"/> 3			Rhenish	<input type="text"/>
						Wt Salt-glazed	<input type="text"/> 38

All quantities exact or estimated minimal counts

Other Artifact & Feature Types:

Prehistoric Artifacts	
Flaked stone	<input type="text"/>
Ground stone	<input type="text"/>
Stone bowls	<input type="text"/>
Fire-cracked rock	<input type="text"/>
Other lithics (all)	<input type="text"/>
Ceramics (all)	<input type="text"/>
Rimsherds	<input type="text"/>
Other fired clay	<input type="text"/>
Human remain(s)	<input type="text"/>
Modified faunal	<input type="text"/>
Unmod faunal	<input type="text"/>
Oyster shell	<input type="text"/>
Floral material	<input type="text"/>
Uncommon Obj.	<input type="text"/>
Other	<input type="text"/>

Prehistoric Features

Mound(s)	<input type="text"/>	Storage/trash pit	<input type="text"/>
Midden	<input type="text"/>	Burial(s)	<input type="text"/>
Shell midden	<input type="text"/>	Ossuary	<input type="text"/>
Postholes/molds	<input type="text"/>	Unknown	<input type="text"/>
House pattern(s)	<input type="text"/>	Other	<input type="text"/>
Palisade(s)	<input type="text"/>		
Hearth(s)	<input type="text"/>		
Lithic reduc area	<input type="text"/>		

Lithic Material

Jasper	<input type="text"/>	Fer quartzite	<input type="text"/>	Sil sandstone	<input type="text"/>
Chert	<input type="text"/>	Chalcedony	<input type="text"/>	European flint	<input type="text"/>
Rhyolite	<input type="text"/>	Ironstone	<input type="text"/>	Basalt	<input type="text"/>
Quartz	<input type="text"/>	Argilite	<input type="text"/>	Unknown	<input type="text"/>
Quartzite	<input type="text"/>	Steatite	<input type="text"/>	Other	<input type="text"/>
		Sandstone	<input type="text"/>		

☒ Dated features present at site

Numerous features containing diagnostic historic artifacts.

Historic Artifacts	
Pottery (all)	<input type="text"/> 321
Glass (all)	<input type="text"/> 246
Architectural	<input type="text"/> 1001
Furniture	<input type="text"/>
Arms	<input type="text"/>
Clothing	<input type="text"/> 13
Personal items	<input type="text"/> 3
Tobacco related	<input type="text"/> 10
Activity item(s)	<input type="text"/> 354
Human remain(s)	<input type="text"/>
Faunal material	<input checked="" type="checkbox"/>
Misc. kitchen	<input type="text"/> 276
Floral material	<input type="text"/>
Misc.	<input type="text"/>
Other	<input type="text"/>

Historic Features

Const feature	<input type="text"/>	Privy/outhouse	<input type="text"/>	Depression/mound	<input type="text"/>	Unknown	<input type="text"/>
Foundation	<input type="text"/>	Well/cistern	<input type="text"/>	Burial(s)	<input type="text"/>	Other	<input checked="" type="checkbox"/>
Cellar hole/cellar	<input type="text"/>	Trash pit/dump	<input type="text"/>	Railroad bed	<input type="text"/>	furnacestack,,platfor	<input type="text"/>
Hearth/chimney	<input checked="" type="checkbox"/>	Sheet midden	<input type="text"/>	Earthworks	<input type="text"/>	m,flue,channel	<input type="text"/>
Postholes/molds	<input type="text"/>	Planting feature	<input type="text"/>	Mill raceway	<input type="text"/>		
Paling ditch/fence	<input type="text"/>	Road/walkway	<input type="text"/>	Wheel pit	<input checked="" type="checkbox"/>		

All quantities exact or estimated minimal counts

Radiocarbon Data:

Sample 1:	<input type="text"/> +/- <input type="text"/> years BP	Reliability	Sample 2:	<input type="text"/> +/- <input type="text"/> years BP	Reliability	Sample 3:	<input type="text"/> +/- <input type="text"/> years BP	Reliability
Sample 4:	<input type="text"/> +/- <input type="text"/> years BP	Reliability	Sample 5:	<input type="text"/> +/- <input type="text"/> years BP	Reliability	Sample 6:	<input type="text"/> +/- <input type="text"/> years BP	Reliability
Sample 7:	<input type="text"/> +/- <input type="text"/> years BP	Reliability	Sample 8:	<input type="text"/> +/- <input type="text"/> years BP	Reliability	Sample 9:	<input type="text"/> +/- <input type="text"/> years BP	Reliability

☐ Additional radiocarbon results available



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External Samples/Data:

Collection curated at Washington County Historical Society

☐ Additional raw data may be available online

Summary Description:

The Antietam Iron Furnace Complex (18WA288) is located near the town of Mt. Aetna, Maryland. The site is frequently referred to as the "Mt. Aetna Furnace". However, this name is problematic given that multiple furnaces have born this name. The Antietam Iron Furnace is more properly described as the first iron furnace constructed at Mt. Aetna. The site is situated near the base of South Mountain where a high-grade iron ore (limonite) outcrops near the surface. Prior to archeological investigations the furnace site lay under a 20° slope covered with secondary plant growth.

Historical research documented the construction of Antietam Furnace in 1761 by William James. Throughout most of its history, however, the furnace operated under the ownership of Daniel and Samuel Hughes. During the American Revolution, the furnace played a very important role in the manufacture of cannons (of various sizes), cannonballs, and grapes shot. The Hughes secured contracts to supply artillery to both the Maryland Council of Safety and the Continental Congress in Philadelphia during the war. Numerous historical documents attest to the rapid changes at the site as it geared up to meet the demands of the Continental Army. Operations at the Antietam Furnace are believed to have ceased sometime before 1783. By the end of the revolution, the Hughes family possessed what was probably the largest iron works complex in western Maryland, as it included several furnaces, forges, and iron works.

The site was rediscovered accidentally by members of the Mt. Aetna Volunteer Fire Department (VFD) in 1976, during construction of an addition to their fire hall. While archeological inquiry could not be undertaken at that time, a few years later when the VFD began planning the construction of a shooting range, they sought assistance from the Maryland Historical Trust. MHT investigated the site with an exploratory trench and found that it was historically significant. Data recovery excavation was subsequently undertaken in the vicinity of the property to be impacted by the proposed shooting range.

Data recovery was conducted in three stages. Stage 1 work, carried out in the spring and summer of 1982, involved the excavation of thirty 2X2 meter units, three 1X2 meter units, and one 2X3 meter unit. The remnants of the furnace stack were identified and exposed on all sides, but excavation to its base was not completed until the following year. Other structural foundations and a considerable portion of a wheelpit were exposed and outlined. In addition, three backhoe trenches were placed in a field along the southern perimeter of the furnace complex to locate additional parts of the site and forested areas of the property were surface surveyed to the extent possible. A fourth backhoe trench was cut through the center of the furnace site between the stack and the wheelpit, which revealed intact stratigraphic deposits. The first phase of excavations revealed that more remained of the furnace complex than previously expected, causing the Mt. Aetna VFD to abandon its plans to construct a firing range. The second stage of excavation was carried out in the fall of 1982, focusing on the portion of the site between the furnace stack and the wheelpit. Thirteen 2X2 meter units and nine 1X2 meter units were opened, the latter primarily along the edge of the backhoe trench placed through the center of the complex in the spring/summer season. Excavations also continued in the units opened up earlier in the year. Following completion of the second field season, the Antietam Furnace Site was successfully nominated to the National Register of Historic Places. Excavations resumed at the site in the fall of 1983. Three additional 2X2 meter units were opened. Fieldwork demonstrated that more structural features existed in the central portion of the site and that they extended to a greater depth than had been presumed at the end of 1982.

Numerous features were encountered during the excavations at the Antietam Iron Furnace Complex. Prominent features include the furnace stack itself (quite small for the era), a stone capped channel to drain groundwater away from the furnace base, a series of features believed to have been bellows supports, and a large and well-constructed wheel pit and tailrace for supplying water power to the bellows. Additional features which may have been furnace support buildings/work areas were also excavated. These structures were covered by a heavy mantle of stone rubble and waste ore when the site was dismantled and abandoned as work moved to a new furnace (sometime before 1783).

The total number of artifacts recovered during the three field seasons at 18WA288 was approximately 2184 objects. Slag, iron casting overflow and waste, stone rubble, and brick fragments are not included in this tally. Excessive quantities of these artifacts were encountered, but only samples were retained. A total of 354 activity items were excavated, a majority of which are related to the historic iron production. Fifty-six unmarked pig iron fragments and 2 marked pigs were recovered at the site. A number of complete plates and plate fragments for iron stoves were excavated; 8 complete plates and 38 fragments from 5-plate stoves, and 1 partial plate from a 6-plate stove. The latter was not manufactured on site. Four other rectangular iron plates were also recovered. One-hundred and ninety-one iron hollowware fragments and one complete hollowware object (a pot) were excavated. One cannonball and one piece of grape shot were recovered. These are interpreted as activity items since they are not used as arms at the site, but are arms manufactured at the site, likely to satisfy the Revolutionary War contract (see above). Byproducts of the iron casting taking place at the site included 31 pieces of gate metal (runners, sprues, and wedges). As stated previously, large quantities of slag, and also casting overflow and waste were recovered, but only samples were retained. Tools thought to be related to iron manufacture include 10 iron chisels and wedges, a pointed iron bar, an iron file, 2 small hammerheads, a small wrought iron punch, and half of a small grinding stone. Six machine parts were encountered and 12 pieces of casting hardware as well. In addition to the activity items noted above, 3 wrought iron washers, 4 wrought iron nuts, a hardware staple, a wrought iron bar, a large monkey wrench, and 2 sections of chain were excavated. A total of 1001 architectural items were recovered including 14 pieces of furnace hardware, 928 hand wrought nails (mostly rose-headed, also L-headed and T headed), 18 cut wire nails, a charred wooden beam, and 40 fragments of window glass. Thirteen clothing items were recovered, 10 of which are copper alloy or pewter buttons. The remaining clothing objects were a copper alloy cuff link, an iron shoe buckle, and a copper alloy shoe buckle. The kitchen assemblage included a total of 803 objects. Ceramics made up a considerable proportion of that assemblage and included 5 sherds of Delftware, 13 sherds of creamware, 3 of pearlware, 53 sherds of whiteware, 5 of ironstone, 10 porcelain sherds, 108 of redware, 38 white salt-glazed stoneware sherds and 86 other stoneware sherds. Two-hundred and six pieces of kitchen glass (mostly bottle glass) were recovered. A total of 276 animal bones (many of which were cut) were excavated, most of which were cattle bones, followed by pigs, sheep and some dogs. Three personal objects were excavated including two pocketknives with bone bolsters and an iron razor. And finally, 10 tobacco-related objects were found. All were kaolin pipe fragments.

Without doubt the Antietam Furnace represents the earliest blast furnace constructed in Washington County, and perhaps in Western Maryland as a whole. The short duration of operations, together with the sealed nature of the furnace site, afforded an excellent opportunity to examine eighteenth century iron-smelting technology and its products. However, the research potential of the Antietam Furnace has by no means been exhausted. Hopefully the site will one day constitute an educational and recreational park for the people of Western Maryland and other interested visitors.

External Reference Codes (Library ID Numbers):

00006316